

ACC NR: AP7001763

(N)

SOURCE CODE: UR/0310/66/000/010/0021/0023

AUTHOR: Galashov, N. (Engineer); Sanov, A. (Engineer)

ORG: [Galashov] LIVT; [Sanov] Gorodets SRMZ

TITLE: Aluminum alloys for marine diesel bearings

SOURCE: Rechnoy transport, no. 10, 1966, 21-23

TOPIC TAGS: aluminum alloy, antifriction alloy, aluminum base alloy, wear resistant alloy, nonferrous metal alloy, journal bearing, antifriction bearing, bearing material, diesel engine, marine engine, internal combustion engine, engine component, marine engineering, ~~inland waterway transportation, ship~~ / ASS6-5 aluminum alloy, A1b-6 aluminum alloy, AN-2.5 aluminum alloy, ASM aluminum alloy, A9-2 aluminum alloy, A020 aluminum alloy

ABSTRACT: The Gorodets SRMZ [Ship Repair and Machine Shops] has provided data showing that 160 crankshaft bearings had to be replaced in 15 ships of the "Volgo-Don" type during the winter layup 1965/66, and that some of the bearings had been in use 3,000 to 3,500 hours. Analysis of the failures established that one cause of wiping results from considerable increase in stress, which in turn leads to fatigue destruction of the antifriction layer. Hence, the use of new, antifriction, alloys capable of operating under high dynamic loads without deterioration in antifriction properties will increase reliability of bearing operation. New material developments have taken into consideration the possibility of reducing the use of scarce non-

ACC NR: AP7001763

ferrous metals. Soviet industry has, in recent years, begun to use on a broader scale such aluminum alloys as ASS6-5, AZh-6, AN-2.5, ASM, A9-2, A020, and others, for sleeve bearings. The use has extended to tractor diesel engines and automobile engines, as well as to marine diesels. The chemical compositions and principle physical and mechanical properties of some of the aluminum bearing alloys are listed, and comparisons with other types of bearing metals are made. The advantages, and disadvantages, of the bimetal and monometal bearing inserts are discussed, and the particular advantage of the latter, so far as river transportation is concerned, is noted. Experimental tests conducted by the Gorodets SRMZ in conjunction with LIVT [Leningrad Institute for Water Transportation] during the 1966 navigation season revealed that A9-2 alloy used in the bearings of a 6NVD-24 engine provided faultless operation for the season, with little wear apparent, and without the need to adjust lube oil clearances. Orig. art. has: 2 figures and 2 tables.

SUB CODE: /3, // /SUBM DATE: None

SNYOV, I. N.

Resheniye problemy Bernsayda dlya pokazatelya 4. L., Uchën. zap. un-ta, ser. matem., 10 (1940).
166-170.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A. G.,
Markushevich, A. I.,
Rashevskiy, P. K.
Moscow-Leningrad, 1948

SAROV, L. N.

SAROV, L. N. A property of a representation of a free group.
Doklady Akad. Nauk SSSR (N.S.) 57: 657-659 (1947).

(Russian)

Previous matrix representations had been given for free groups, but these made use of transcendental numbers. Here it is shown that the group generated by

$$a = \begin{pmatrix} 1 & 2 \\ 0 & 1 \end{pmatrix}, \quad b = \begin{pmatrix} 1 & 0 \\ 2 & 1 \end{pmatrix}$$

is a free group. The proof depends on showing that no matrix $a^i b^j a^k b^m \dots$ leaves the vector $v = [1, 0]$ invariant, where i, j, k, m, \dots are integers, positive or negative and all except possibly i different from zero. By direct calculation it is shown that in the vectors $va^i, va^i b^j, va^i b^j a^k, \dots$ the numerical values of the greater argument are increasing. In a second theorem it is shown that the matrices of this free group are those unimodular matrices of the form $\begin{pmatrix} x & y \\ z & w \end{pmatrix}$.
M. Hall, Jr. (Columbus, Ohio)

Handwritten note: $a^i b^j$

Source: Mathematical Reviews, 1948, Vol 9, No. 5

SANOV, I. N.

Sanov, I. N. On Burnside's problem. Doklady Akad. Nauk SSSR (N.S.) 57, 759-761 (1947) (Russian)

Let \mathcal{G} be a group with k generators every element of which is of order n . Let \mathcal{F} be a free group of two generators. Let D_{n^λ} be that subgroup of \mathcal{G} generated by all the n^λ powers of the elements of \mathcal{G} , where λ is a positive integer. If for all such λ the groups $\mathcal{G}/D_{n^\lambda}$ are finite, it is proved that \mathcal{G} is finite. Let \mathcal{F} be a free group of k generators, and let B_n be that subgroup of \mathcal{F} generated by the n th powers of the elements of \mathcal{F} . Let $\phi_n(k)$ be the order of \mathcal{F}/B_n . For particular values of n and k some lower bounds on this order are obtained. Typical are $\phi_4(2) \geq 8 \cdot 6^{23}$ and

$$\phi_4(k) \geq \exp [k + k + 2^2(k - 1)].$$

F. Haimo (St. Louis, Mo.)

Handwritten initials

Source: Mathematical Reviews, 1948, Vol 9, No. 5

SANOV, I. N.

Sanov, I. N. - "Functions with integral parameters with the least deviation from zero," Uchen. zapiski (Leningr. gos. un-t im. Zhdanova), Seriya matem. nauk, Issue 16, 1949, p. 32-46.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 17, 1949).

SANOV, I.N.

Functions with integer parameters least deviating from zero. Uch.
zap. IOU no. 111:32-46 '49. (MLRA 10:8)
(Polynomials)

SANOV, I.N.

Mathematical Reviews
Vol. 14 No. 8
Sept. 1953
Algebra

8-9-54 LL

Sanov, I. N. On a certain system of relations in periodic groups with period a power of a prime number. *Izvestiya Akad. Nauk SSSR. Ser. Mat.* 15, 477-502 (1951). (Russian)

This paper is concerned with the Burnside subgroup $B(p^r)$ of a free group F generated by the p^r th powers of elements of F (p a prime). The results are in terms of higher commutators. Thus with $sp^r - 1$ V 's it is shown that $(U, V, \dots, V)^{s^r-1} \equiv 1 \pmod{B(p^r) \cup F_{s^r+1}}$ where F_r is the r th term in the lower central series for F . The method depends on work of Magnus [J. Reine Angew. Math. 182, 142-149 (1940); these Rev. 2, 214] who showed that if x, y are associative but not commutative indeterminates, the formal power series e^x, e^y generate a free group F . The Baker-Hausdorff formula for z in $e^x e^y = e^z$ expresses z in the form $z = x + y + \frac{1}{2}(xy - yx) + \dots$ where the remaining terms are commutator forms in x and y . In F for an arbitrary $g = e^x$ we write $u = P_0 + P_1 + \dots + P_i + \dots$ where P_i is of degree i in x . Elements with $P_0 = 0$ form the normal subgroup N generated by all conjugates of e^x . Those with $P_0 = P_1 = 0$ form a normal subgroup G_2 , which is the derived group N' of N . Calculations are carried out modulo G_2 . Marshall Hall.

(2)
M
3

USSR/Mathematics - Groups, Periodic Jan/Feb 52

"Establishing the Connection Between Periodic Groups With Period Modulo Prime Number and Lie Rings," I. N. Sanov

"Iz Ak Nauk SSSR, Ser Matemat" Vol XVI, No 1, pp 23-58

Studies the Lie ring composed of periodic group with period modulo prime number. Obtains a series of relations of the indicated ring. Results are applied to study of periodic group with periods 3 and 5 (in the latter case for 2 generators). This article is similar to the report read at the

206766

USSR/Mathematics - Groups, Periodic Jan/Feb 52 (Contd)

Seminar of Leningrad Branch of Math Institut Steklov, Acad Sci USSR, in 1948. Its abstract was published in "Uspekhi Matemat Nauk" Vol IV, No 3 (31), 1949, p 180. In the Annals of Math, 52, No 1 1950, pp 111-126 appeared a similar report by W. Magnus. Submitted by Acad I. M. Vinogradov, 15 Nov 51.

206766

SANOV, I. N.

SANOV, I. N.

Sanov, I. N. A new proof of Minkowski's theorem. *Izvestiya Akad. Nauk SSSR. Ser. Mat.* 16, 101-112 (1952). (Russian)

The theorem in question is that generally known as the Minkowski-Hlawka theorem; it was stated without proof by Minkowski and proved by Hlawka in a paper which appeared in 1943 [*Math. Z.* 49, 285-312 (1943); these Rev. 5, 201]. The author gives a proof of this theorem, based on another paper of his [*Leningrad. Gos. Univ. Uchenye Zapiski* 111, 32-46 (1949)], which the reviewer has not been able to consult. The author states that this earlier paper was presented to a seminar at Leningrad in 1941, and that Lemma 1 in it represents an "insignificantly weaker" form of the theorem. There is no reference to the other proofs of the Minkowski-Hlawka theorem which have since been given [see, e.g., Rogers, *Ann. of Math.* 48, 904-1002 (1947); these Rev. 9, 270]. In view of these later proofs, the paper of Sanov is probably now only of historical interest.

H. Davenport (London).

S. J. ...

Source: *Mathematical Reviews*,

Vol. 13 No. 19

SANOV, I. N.

Groups, Theory of

Determination of the connection between periodic groups with a simple number as period and the rings of Lie, Izv. AN SSSR. Ser. mat. 16 No. 1, 1952

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

SANOV, I. N.

2

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress* (Cont.) Moscow, Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.

There are 3 references, 2 of which are USSR, and 1 is English.

125-127

Sanov, I. N. (Moscow). On the Probability of the Large Deviations of a Random.

127-129

Mention is made of Smirnov, N. N. and Petrov, V. V.

Sarmanov, O. V. (Leningrad). Limiting Discrete Distribution for Nonhomogeneous Two-state Markov Chains.

129-130

There are 2 references, 1 of which is USSR, and the other one English.

Sarymsakov, T. A. (Tashkent). Limit Theorems for Nonhomogeneous Markov Chains.

130

There is 1 USSR reference.

Card 41/80

*

39-1-2/5

On the probability of large deviations of random quantities.
(Cont.)

$$P\left(\frac{m - Np}{\sqrt{Npq}} \rightarrow A\right), \quad A - \text{constant}, \quad q = 1 - p$$

are obtained for the probability.

Asymptotic formulae:

$$P\left(\frac{m - Np}{\sqrt{Npq}} \rightarrow AN^\alpha\right), \quad 0 < A, \quad 0 < \alpha < 1/2$$

have been studied by Smirnov (1), Kramer (4) and Petrov (5).
Here, a method is developed which leads, for example, in the case of a Bernoulli distribution to asymptotic expressions:

$$P\left(\frac{m - Np}{\sqrt{Npq}} \rightarrow \gamma(N)\right), \quad \text{where } \gamma(N) = o(N^{1/2})$$

Card 2/3 for the probability.

KOZLOV, N.; KOSTOGLODOV, I., inzh.; SANOV, K.

Aviation abroad. Grazhd. av. 12 no.7:35-39 JI '55. (MIRA 11:6)
(Aeronautics, Commercial)

SAL'NIKOV, Ye.P.[Sal'nykov, IE.P.]; KAGANOVA, T.M.[Kahanova, T.M.];
red.; SAROV, L.S.[translator]; POTOTSKAYA, L.A.[Potots'ka,L.A.],
tekhn. red.

[General care of patients] Zahal'nyi dohliad za khvorymy. Kyiv,
Derzh.med.vyd-vo URSR, 1961. 204 p. (MIRA 15:3)
(MEDICAL CARE)

TREGUBENKO, Anatoliy Ivanovich [Trehubenko, A.I.]; DEYNEKA, I.Ya.,
zasl. deyatel' nauki, prof., red.; SANOV, L.S.
[translator]

[Surgical treatment of thrombophlebitis] Khirurgichne li-
kuvannia tromboflebitiv. Kyiv, Derzhmedvydav URSR, 1964.
152 p. (MIRA 18:1)

SANOV, N.; NEVEDROV, V.

Improvement of slag removal. Sakh.prom. 29 no.4:27-29 '55.
(MIRA 8:9)

1. Kiyevskiy sakhsveklotrest
(Furnaces)

ZOTOV, V.P.; MAKHINYA, M.M.; PARSHIKOV, M.Ya.; GAVRILOV, A.N.; SILIN, P.M.;
GOLOVIN, P.V.; KHEYZE, N.V.; BUZANOV, I.F.; KHELEMSKIY, M.Z.;
YAPASKURT, V.V.; SHARKO, A.P.; SANOV, N.M.; LITVAK, I.M.; IVANOV,
S.Z.; LEPESHKIN, I.P.; KLEYMAN, B.M.; YEPISHIN, A.S.; GOLUB, S.I.;
GERASIMOV, S.I.; GEUBE, V.R.; PASHKOVSKIY, F.M.; LITVINOV, Ye.V.;
BENIN, G.S.; IVANOV, P.Ya.; VINOGRADOV, N.V.; PONOMARENKO, A.P.;
ZHIDKOV, A.A.; KOVAL', Ye.T.; KARTASHOV, A.K.; NOVIKOV, V.A.

Sixtieth birthday of A.N.Shakin, Director of the Central
Scientific Research Institute of the Sugar Industry. Sakh.
prom. 35 no.7:33 JI '61. (MIRA 14:7)
(Shakin, Anatolii Nikitovich, 1901-)
(Sugar industry)

LOZINSKIY, M.O.; PEL'KIS, P.S.; SANOVA, S.N.

Condensation and cyclization of aryl azo chloroacetic acids.

Part 1: 4-Phenyl-substituted Δ^2 1,3,4-oxadiazolin-5-ones.
Zhur.ob.khim. 33 no.7:2231-2235 J1 '63. (MIRA 16:8)

1. Institut organicheskoy khimii AN UkrSSR.
(Oxadiazolinone)

LOZINSKIY, M.O.; FEL'KIS, P.S.; SANOVA, S.N.

Preparation of arylazochloroacetic acids and 4-phenyl-substituted
 Δ^2 -1,3,4-oxadiazolin-5-one. Ukr. khim. zhur. 30
no.1:68-72 '64. (MIRA 17:6)

1. Institut organicheskoy khimii AN UkrSSR.

LOZINSKIY, M.O.; SANOVA, S.N.; PEL'KIS, P.S.

1,5-Diaryl-3-(arylsulfonyl) formazans. Zhur.org.khim. 1 no.2:314-318 F '65. (MIRA 18:4)

1. Institut organicheskoy khimii AN UkrSSR.

SANOVICH, A.M.

Semiautomatic instruments used for high-speed determination of the
moisture content in coals and lignites. *Enl. tekhn.-ekon. inform.*
no.1:9-10 '57. (MIRA 11:4)
(Coal--Testing) (Lignite--Testing) (Measuring instruments)

SANDVICH, A.M., inzh.

Semiautomatic apparatuses for the rapid determination of moisture
content in coal. Sbor. inform. po obog. i brik. ugl. no. 1:59-62
'57. (MIRA 11:4)

(Hydrometer) (Coal--Testing)

SANOVICH, I.M., inzh.

Electrical equipment of the German Democratic Republic exhibited at the
Leipzig Fair in the spring of 1965. Elektrotehnika 36 no.7:62 J1 '65.
(MIRA 18:7)

SANOVICH, I. M.

"Production of Penicillin and Streptomycin in the USA," Med. Prom., No. 2, 1949.

SANOVICH, I.M., inzh.; TAPIROV'SKIY, I.F., inzh.

Exhibition of Bulgarian electric equipment held in Moscow.
Elektrotehnika 35 no.3-63-62 Nr 164. (MIRA 1715)

TRUPAK, Nikolay Grigor'yevich, prof., doktor tekhn. nauk; BORODIN, N.V.,
gornyy inzh., retsenzent; ZIMIN, V.N., gornyy inzh., retsenzent;
SANOVICH, P.O., gornyy inzh., red.; PETRAKOVA, Ye.P., red. izd-va;
SHKLYAR, S.Ya., tekhn. red.

[Ways of controlling water during shaft sinking in potash and
salt mines] Sposoby bor'by s vodoi na kaliinykh i solianykh rud-
nikakh pri prokhodke stvolov. Moskva, Gos.nauchno-tekhn.izd-vo
lit-ry po gornomu delu, 1961. 319 p. (MIRA 15:1)
(Salt mines and mining) (Mine water)

VYALOV, Sergey Stepanovich, prof., doktor tekhn. nauk; GMOSHINSKIY,
Vsevolod Georgiyevich; GORODETSKIY, Stanislav Eduardovich;
GRIGOR'YEVA, Vera Grigor'yevna; ZARETSKIY, Yuriy Konstantinovich;
PEKARSKAYA, Nina Kazimirovna; SHUSHERINA, Yelizaveta Petrovna;
SANOVICH-OSIPOV, P.O., red.; DOROKHINA, I.N., tekhn. red.

[Stability and creep of frozen ground and calculations of ice
walls] Prochnost' i polzuchest' merzlykh gruntov i raschety
ledogruntovykh ograzhdenii. Moskva, Izd-vo Akad. nauk SSSR,
1962. (MIRA 15:9)

(Frozen ground)

SANOYAN, O., kand.tekhnicheskikh nauk

New types of sprinklers. Prom.Arm. 4 no.2:29-32 F '61.

(MIRA 14:6)

(Armenia--Sprinklers)

SANOUSKAYA, S.A.

16(0)

P.2

PHASE I BOOK EXPLOITATION

SOV/3177

Matematika v SSSR za sorok let, 1917-1957. tom 1: Obzornyye stat'ii
(Mathematics in the USSR for Forty Years, 1917-1957), Vol. 1:
Review Articles) Moscow, Fizmatgiz, 1959. 1002 p. 5,500 copies
printed.

Eds: A. G. Kurosh, (Chief Ed.), V. I. Bitvutskov, V. G. Boltyanskiy,
Ye. B. Dynkin, G. Ye. Shilova, and A. P. Yushkevich; Ed. (Inside
book): A. F. Lapko; Tech. Ed.: S. N. Akhlamov.

PURPOSE: This book is intended for mathematicians and historians
of mathematics interested in Soviet contributions to the field.

COVERAGE: This book is Volume I of a major 2-volume work on the
history of Soviet mathematics. Volume I surveys the chief con-
tributions made by Soviet mathematicians during the period 1947-
1957; Volume II will contain a bibliography of major works since
1917 and biographic sketches of some of the leading mathema-
ticians. This work follows the tradition set by two earlier
works: Matematika v SSSR za pyatnadtsat' let (Mathematics in
the USSR for 15 Years) and Matematika v SSSR za tridtsat' let

Card 1/18

Mathematics in the USSR (Cont.)

SOV/3177

(Mathematics in the USSR for 30 Years). The book is divided into the major divisions of the field, i.e., algebra, topology, theory of probabilities, functional analysis, etc., and contributions and outstanding problems in each discussed. A listing of some 1400 Soviet mathematicians is included with references to their contributions in the field.

TABLE OF CONTENTS:

Editorial Comment	11
<u>Sanovskaya, S. A.</u> Mathematical Logic and the Foundations of Mathematics	13
Introduction	13
Ch. I. Certain Problems of the Theory of Sets	18
1. Axiomatic theory of sets	18
2. Descriptive theory of sets	27

Card 2/18

Mathematics in the USSR (Cont.)	SOV/3177
Ch. II. Theory of Algorithms and Computable Functions and Operators	34
3. On the representation of recursive functions. Functions of great range	34
4. Definition of an algorithm. General theory of algorithms	39
5. Countable sets and computable operations on sets. General concepts of numeration and a program	46
6. Definition of a queing problem and the algorithmic convergence of queing problems. Structure of the degree of difficulty	50
7. The problem of Post convergence and related problems	57
8. Descriptive properties of arithmetical sets. Problems of classifying sets, functions, and other objects	65
Ch. III. Mathematical Applications of the Theory of Algorithms	72
9. Algorithmic problems of algebra	72
10. Constructive interpretation of mathematical statements. Constructive mathematical analysis	80

Card 3/18

Mathematics in the USSR (Cont.)	SOV/3177
Ch. IV. Logical and Logico-Mathematical Calculus	85
11. Constructive calculi from the classical and constructive points of view	85
12. Logical calculi and their models. Problems of solvability, completeness, and non-contradiction	91
13. The algebra of logic and its generalizations	102
Conclusion	115
Linnik, Yu. V. Theory of Numbers	121
Kurosh, A. G., and V. M. Glushkov. General Algebra	151
1. Introduction	151
2. Abstract theory of groups	154
3. Topological groups	173
4. Ordered groups	180
5. General theory of semigroups	182
6. Rings and algebras	188
7. Lattices. General algebraic systems. Projective planes	196

Card 4/18

Mathematics in the USSR (Cont.)	SOV/3177	
Fadeyev, D. K. Theory of Fields and Polynomials		201
Dynkin, Ye. B. Linear Algebra		207
1. Special properties of matrices		207
2. Theory of invariants		209
3. Other problems of linear algebra		211
Dynkin, Ye. B. Theory of Lie Groups		213
1. The structure of Lie groups and algebras		216
2. Linear representations of Lie groups and algebras		216
3. Homogeneous varieties and subgroups of Lie groups		220
4. The topology of Lie groups and homogeneous varieties		225
Aleksandrov, P. S., and V. G. Boltyanskiy. Topology		229
Part I. Set-theoretic Topology		230
1. Abstract topology		230
2. General theory of continuous mappings of metric spaces		241

Card 5/18

Mathematics in the USSR (Cont.)	SOV/3177	
3. General combinatorial topology		245
A. Combinatorial topology of compacta (and bi-compacta)		245
B. Combinatorial topology of non-compact sets		249
C. Projective spectra		259
4. Works not entering into any of the above paragraphs		261
Part II. Algebraic Topology		263
1. Certain works of foreign mathematicians		263
2. Homotopic groups of spheres. Pontryagin's method of rigged manifolds		267
3. Revealing new cohomological operations. Classification theorems of Pontryagin and Postnikov		270
4. The topology of fibre bundles and fibred spaces		276
5. Natural systems of M. M. Postnikov		280
6. Characteristic cycles of Pontryagin and the inner homologies of Rokhlin		285
7. Various results not mentioned earlier		291

Card 6/18

Mathematics in the USSR (Cont.)	SOV/3177	
10. Set functions		346
11. Certain common types of integrals		347
12. Entire functions of finite degree		352
13. Weighted approximations on the whole axis		355
14. Polynomials of the best approximation		357
15. Polynomials of the best approximation with supplementary conditions		363
16. Almost periodic functions		366
17. Quasianalytic functions		369
18. Theory of moments		371
19. Inequalities		372
20. Orthogonal polynomials		376
21. Special functions		378
Theory of Functions of a Complex Variable		381
Gel'fond, A. O. Introduction		381
Mergelyan, S. N. Approximations of Functions of a Complex Variable		383
Card 8/18		

Mathematics in the USSR (Cont.)	SOV/3177	
Yevgrafov, M. A. Interpolation of Entire Functions		398
Tumarkin, G. Ts., and S. Ya. Khavinson. Power Series and Their Generalization. Problem of Monogeneity. Boundary properties		407
Bazilevich, I. Ye. Geometric Theory of Functions		444
Introduction		444
1. Univalent functions in a circle		446
2. Univalent functions in multiply connected regions		459
3. Multivalent functions		463
Volkovskiy, L. I. Riemann Surfaces		472
Introduction		472
1. Classification of Riemann surfaces		474
2. Geometric theory of entire and meromorphic functions		476

Card 9/18

Mathematics in the USSR (Cont.)	SOV/3177
3. Analytic and quasianalytic functions and differentials on Riemann surfaces	477
4. Various problems. Problematics	480
Shabat, B. V. Generalization and Analogies of the Theory of Analytic Functions	481
Fuks, B. A. Functions of Many Complex Variables	494
Gakhov, F. D., and B. V. Khvedlidze. Boundary-value Problems of the Theory of Functions of a Complex Variable	498
Nemytskiy, V. V. Ordinary Differential Equations	511
1. Scientific schools in the USSR in the field of ordinary differential equations	511
2. Analytic representation of solutions (problems of algorithmic solvability)	514
3. Asymptotes of the solutions of differential equations	519
4. Method of continuous extension (method of small parameter)	526

Card 10/18

Mathematics in the USSR (Cont.)

SOV/3177

5. Method of small parameter for finding periodic and almost periodic solutions and other bounded solutions	529
6. Degenerate systems of differential equations	535
7. Lyapunov stability	538
8. Existence theorems and general qualitative theory	547
9. Theory of dynamic systems and other generalizations of the theory of ordinary differential equations	557
Vishnik, M. I., A. D. Myshkis, and O. A. Oleynik, Partial Differential Equations	563
Ch. I. Elliptic-type Equations	566
1. Classical equations of mathematical physics	566
2. Linear elliptic equations of the second order	572
3. Elliptic equations of the plane	575
4. Solution of boundary value problems by means of integral equations	580
5. Embedding theorems	582
6. Variational methods of solving boundary value problems	586
7. Non-self-conjugate problems	589

Card 11/18

Mathematics in the USSR (Cont.)

SOV/3177

- 4. Variational theory of general nonlinear operators 641
- 5. Topological methods of the theory of critical points 643
- 6. Variational calculus in the large and the topology of functional spaces 645
- 7. Variational methods of solving problems in physics and engineering 647

Mikhlin, S. G. Linear Integral Equations 649

- 1. Fredholm equations 649
- 2. Completely continuous operators 651
- 3. Kernels dependent on the parameter 654
- 4. One dimensional singular integral equations 656
- 5. Equations with difference kernels 665
- 6. Multidimensional singular integral equations 669
- 7. Integro-differential equations 673

Krasnosel'skiy, M. A., M. A. Naymark, and G. Ye. Shilov.

Functional Analysis 675

- 1. Banach and Hilbert spaces 677
- 2. Semi-ordered spaces and spaces with cone 688

Card 13/18

Mathematics in the USSR (Cont.)

SOV/3177

3. Normed rings	698
4. Representations of rings and groups	704
5. Differential equations in abstract spaces	718
6. Equations with nonlinear continuous operators	728
7. Spectral analysis of self-conjugate differential operators	746
8. Spectral analysis of non-self-conjugate operators	763
9. Linear topological spaces, generalized functions	773
Kolmogorov, A. N. Probability Theory	781
1. Distributions. Random functions and processes	782
2. Stationary processes and homogeneous random fields	783
3. Markov processes with continuous time	785
4. Limit theorems	789
5. Distributions of sums of independent and weakly dependent summands and infinitely divisible distributions	791
Gikhman, I. I., and B. V. Gnedenko. Mathematical Statistics	797

Card 14/18

Mathematics in the USSR (Cont.)

SOV/3177

Gavurin, M. K., and L. V. Kantorovich. Approximation and Numerical Methods	809
Introduction	809
1. Iterative methods of solving linear problems	812
2. Gradient methods	814
3. Variational methods	817
4. Method of moments	820
5. General theories of approximation methods	822
6. Methods of solving nonlinear problems	823
7. Theory of approximations	827
8. Mechanical quadratures	830
9. Problems of linear algebra	833
10. Integral equations	835
11. Ordinary differential equations	837
12. Difference methods for partial differential equations	841
13. Approximation methods of conformal mappings	846
14. Extremal planning-production problems and linear programming	848
15. Tables	850

Card 15/18

Mathematics in the USSR (Cont.)

SOV/3177

Vasil'yev, A. M., Norden, A. P., and Finikov, S. P.
Differential Geometry

899

1. Problems of classical differential geometry and their generalizations
2. Riemann spaces and spaces of affine connection
3. Theory of nets
4. Induced connections
5. Complex spaces
6. Theory of geometric objects

899

907

911

913

915

918

Yefimov, N. V. Geometry "in the Large"

925

1. Geometry on a convex surface
2. Single valued determination of convex surfaces
3. Regularity of convex surfaces with regular metric
4. General theory of surfaces. Polyhedra
5. Existence, uniqueness, and regularity of surfaces under given conditions of Gaussian curvature. Certain nonlinear boundary value problems
6. Singularity of surfaces given a function of the principle curvatures

926

930

932

933

942

944

Card 17/18

SANOYAN, G.

Basis for a rational work and rest schedule for women workers in
textile production. Biul. nauch. inform.: trud i zar. plata 4
no.10:12-18 '61. (MIRA 14:10)

(Women--Hours of labor)
(Textile industry)

SANOYAN, G.G. (Dedovsk, Moskovskaya oblast')

Invigorating minutes. Zdorov'ie 5 no.10:25 0 '59.
(CALLISTHENICS)

(MIRA 13:2)

SANOYAN, G.G., aspirant

Physical culture in factories increases efficiency. Tekst. prom.
19 no.11:80-81 N '59. (MIRA 13:2)

1. Tsentral'nyy nauchno-issledovatel'skiy institut fiskul'tury.
(Textile workers) (Physical education and training)

SANDYAN, M.G.; MOSIYANKO, N.A.

Heat and water balance of an irrigated field in the Kulunda
Steppe. Izv. SO AN SSSR no. 10. Ser. tekhn. nauk no. 3:
140-147 '65 (MIRA 19:1)

1. Institut gidrodinamiki Sibirskogo otdeleniya AN SSSR, Novo-
sibirsk i Agrofizicheskiy nauchno-issledovatel'skiy institut,
Leningrad. Submitted January 5, 1965.

SANDYAN, O.M.

Closed pressure irrigation net under complex relief and ground conditions. Izv. AN Arm. SSR. Biol. i sel'khoz. nauki 10 no.3: 89-96 Mr '57. (MIRA 10:5)

1. Institut gidrotekhniki i melioratsii Ministerstva vodnogo khozyaystva ArmSSR.
(Armenia--Irrigation)

SANOYAN, O. M.: ^{Cond} Master Tech Sci (diss) -- "Some problems of rain in the Armenian SSR in connection with the use of natural pressure". Yerevan, 1958.
26 pp (Min Higher Educ USSR, Georgian Order of Labor Red Banner Agric Inst),
150 copies (KL, No 4, 1959, 127)

USSR / Soil Science. Cultivation. Improvement. Erosion.

J-5

Abs Jour : Ref. Zhur - Biologiya, No 17, 1958, No. 77455

Author : Sanyan, S. V.

Inst : The Armanian Scientific-Research Institute of Hydrotechnics and Amelioration

Title : Experiment of Irrigation by Sunken Trenches

Orig Pub : Tr. Arm. n.-i. in-ta gidrotekhn. i molior. 1957, 2, 185-192

Abstract : The use of sunken trenches on sowings of spring wheat on weakly-permeable light and heavy-clayey soils in the Artashat Rayon (1954) permitted a significant decrease in the volume of the watering norm. Four waterings with the general irrigation norm of 2630 m³/ha were given by sunken trenches compared to the 3072 m³/ha in ordinary trenches; the harvest of wheat obtained was 28.1, compared to 22.2 c/ha on the plot with ordinary trenches. The length of the sunken trenches can be increased to 300-400 m. -- S. A. Nikitin.

Card 1/1

SANDYAN, S. V. Cand Tech Sci — (diss) "Investigation of pneumatic tires of farming machinery as working parts for making sunken irrigation trenches," Yerevan, 1960, 20 pp, 150 cop (Armenian Agricultural Institute) (KL, 43-60, 118)

SANCYAN, V. G.

"Theory of Axisymmetric Flow in a Channel of Arbitrary Profile and Its Application to the Calculation of a Real Pressure Field." Cand Tech Sci, Leningrad Polytechnic Inst, Leningrad, 1954. (RZhMekh, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

SANOYAN, V.G.

Design of plane and axisymmetric contraction cones and diffusers used in pressure systems; the basis for the calculation is a given axial velocity distribution. Izv.AN Arm.SSR Ser.FMET 8 no.6:1-17 N-D '55. (MIRA 9:7)

1.Vedno-energeticheskiy institut AN Armyanskey SSR.
(Water pipes) (Fluid mechanics)

SANOYAN, V.G.

Hydrodynamic method of calculating convergent and divergent passages.
Izv. AN Arm. SSR, Ser. FMEI nauk 9 no.3:63-89 '56. (MLBA 9:9)

1. Vvedno-energeticheskiy institut AN Armyanskoy SSR.
(Diffusers) (Fluid dynamics)

SANOYAN, V.G.

Predetermined inlet speed diagrams for designing diffuser profiles.
Izv. AN Arm. SSR. Ser. FIZM nauk 9 no.7:29-35 '56. (MLBA 9:11)

1. Vodno-energeticheskiy institut AN Armysanskoy SSR..
(Hydraulic engineering)

SANOYAN, V.G.

Hydrodynamical calculations of arbitrary-outline flat channels.
Dokl.AN Arm.SSR 22 no.2:49-53 '56. (MIRA 9:7)

I.Vedno-energeticheskiy institut Akademii nauk Armyanskey SSR.
Predstavlene I.V.Yegiasarevym.
(Hydrodynamics)

SANOYAN, V.G.

Representation of some plane and axisymmetric flows by Fourier's
and Fourier-Bessel's integrals. Dokl. AN Arm. SSR 22 no. 4:149-156
'56. (MLRA 9:8)

1. Vodno-energeticheskiy institut Akademii nauk Armyanskoy SSR.
Predstavleno N. Kh. Arutyunyanom.
(Fourier's series) (Bessel's functions) (Hydrodynamics)

SANOYAN, V.G.

Theory of the movement of suspended alluvium. Dokl. AN Arm.
SSR 23 no.1:11-15 '56. (MIRA 9:11)

1. Vodno-energeticheskiy institut Akademii nauk Armyanskoy
SSR. Predstavleno I.V. Yegiazarovym.
(Alluvium) (Hydraulics)

SANOYAN, V.G.
POKHSRARYAN, M.S.; SANOYAN, V.G.

Hydrodynamic calculation of flat flow with a side outlet. Izv. AN
Arm. SSR. Ser. fiz.-mat. nauk 10 no.6:25-40 '57. (MIRA 11:2)

1. Vodno-energeticheskiy institut AN ArmSSR.
(Stream measurements)

SANOYAN, V.G.; KHUBLARYAN, M.G.

Method for shaping shaft spillways. Dokl. AN Arm. SSR 31 no3:141-145
'60. (MIRA 13:12)

1. Institut energetiki i gidravliki Akademii nauk Armyanskoy SSR.
Predstavleno akademikom AN Armyanskoy SSR I.V. Yegiazaryanom.
(Spillways)

SANOYAN, V.G.

Suspension of small particles in a vertical pipe. Izv.AN Arm.SSR.
Ser.tekh.nauk 16 no.2/3:51-58 '63. (MIRA 16:9)
(Pipe--Hydrodynamics)

SANOYAN, Z. G.

Distr: LEAF

Sanoyan, Z. G. On the theory of motion of suspended
drifts. Akad. Nauk Armyan. SSR. Dokl. 23 (1956),
11-15. (Russian. Armenian summary)

2
I-FW

8/11

SANPITER I. A.

Aleksei Sergeevich Shkliarevskii (k 110-letiiu so dnia pozhdaniia).
Aleksei Sergeevich Shkliarevskii, 110 years since his birth/
Archi. pat., Moskva 12:4 July-Aug 50 p. 88-92.

1. Of the Department of Pathological Physiology (Head -- Prof. S. M. Pavlenko), First Moscow Order of Lenin Medical Institute.

CL'L 19, 5, Nov 50

SANPITER, I.A.

A case of unusual calcinosis universalis. Vest.rent. i rad.
33 no.5:94-95 S-0 '58 (MIRA 11:11)

1. Iz rentgenologicheskogo kabineta poliklinicheskogo otdeleniya
gorodskoy bol'nitsy No.15 Moskvy (glavnyy vrach L.A. Pylayev).
(CALCINOSIS, case reports
unusual case (Rus))

SANPITER, I.A.

Case of congenital Y-form sternoschisis. Vest. rent. i rad. 34 no.2:
84 Mr-Ap '59. (MIRA 13:4)

1. Iz rentgenovskogo kabineta poliklinicheskogo otdeleniya ob"yedi-
nennoy gorodskoy bol'nitsy No.15 (glavnyy vrach L.A. Pylayev).
(STERNUM, abnorm.
sternoschisis, Y-form (Ens))

LUKOMSKIY, G.I. (Moskva, ul.Zhdanova,d.6,kv.6); SANPITER, I.A.

Combined bronchoscopy and bronchography under general
anesthesia. Grud. khir. 2 no.1:73-76 Ja-F '60. (MIRA 15:3)

1. Iz fakul'tetskoy khirurgicheskoy kliniki sanitarno-
gigiyenicheskogo fakul'teta (zav. - prof. I.S. Zhorov)
I Moskovskogo ordena Lenina meditsinskogo instituta imeni
I.M. Sechenova i rentgenologicheskogo otdeleniya gorodskoy
klinicheskoy bol'nitsy No.61 (glavnyy vrach L.N. Vasilevskaya).

(BRONCHOSCOPY)

(BRONCHI--RADIOGRAPHY)

(ANESTHESIA)

ROZENSHTRAUKH, L.S. (Moskva, Volokolamskoye shosse, d.14-b, kv.84);
LUKOMSKIY, G.I.; GERASIMOVA, V.D.; SANPITER, I.A.

Use of adhaegon for anesthesia of the tracheobronchial tree.
Grud. khir. 2 no.3:82-84 My-Je '60. (MIRA 15:3)

1. Iz kafedry rentgenologii (zav. - prof. Yu.N. Sokolov) Tsentral'-
nogo instituta usovershenstvovaniya vrachey i kafedry fakul'tetskoy
khirurgii (zav. - prof. I.S. Zhorov) i I Moskovskogo ordena Lenina
meditsinskogo instituta na baze 61-y klinicheskoy bol'nitsy (glavnyy
vrach - kand.med.nauk L.N. Vasilovskaya).

(ANESTHESIA, INTRATRACHEAL)
(BRONCHI--SURGERY)

SANPITER, I.A.

Appliance for double contrast in the examination of the stomach,
Vest.rent.i rad. 35 no.1:55 Ja-P '60. (MIRA 13:6)

1. Iz rentgenologicheskogo otdeleniya (zav. I.A. Sanpiter)
Moskovskoy gorodskoy klinicheskoy bol'nitsy No.61 (glavnyy
vrach L.N. Vasilevskaya).
(STOMACH radiog.)

SANPITER, I.A.

Röntgenological observations on the conditions of the lungs
in (endobronchial) anesthesia. Grud.khir. no.3:81-86 '61.

(MIRA 14:9)

1. Iz fakul'tetskoy khirurgicheskoy kliniki sanitarno-gigiyeni-
cheskogo fakul'teta (zav. - prof. I.S. Zhorov) I Moskovskogo
ordena Lenina meditsinskogo instituta imeni I.M. Sechenova i
rentgenologicheskogo otdeleniya Gorodskoy klinicheskoy bol'-
nitsy No.6 (glavnyy vrach - kand.med.nauk L.N. Vasilevskaya).
(INTRATRACHEAL ANESTHESIA) (LUNGS—RADIOGRAPHY)

LUKOMSKIY, G.I.; RYZHKOV, Ye.V.; SANPITER, I.A. (Moskva, G-248, Kutuzovskiy
prosp., d.11/7, kv.11); SOLOV'YEVA, I.P.

Primary lung sarcoma. Grud. khir. 2 no.5:109-113 S-0 '60.

(MIRA 16:5)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. I.S.Zhorov)
sanitarno-gigiyenicheskogo fakul'teta I Moskovskogo ordena Lenina..
meditsinskogo instituta imeni I.M.Sechenova i rentgenologicheskogo
otdeleniya i proektury 61-y gorodskoy klinicheskoy bol'nitsy
(glavnyy vrach L.N.Vasilevskaya).

(LUNGS--CANCER)

SANPITER, I.A., (Moskva, G-248, Kutuzovskiy pr., d.11/7, kv.11);
STARIKOV, A.Ye.

Case of spontaneous exit of a bullet through the bronchus.
Vest.khir. 86 no.3:117-118 Mr '61. (MIRA 14:3)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (sav. - prof. I.S. Zhorov) sanitarno-gigiyenicheskogo fakul'teta 1-go Moskovskogo ordena Lenina meditsinskogo instituta im. I.M. Sechenova i gorodskoy klinicheskoy bol'nitsy No.61 g. Moskvy (gl. vrach - L.M. Vasil'evskaya).
(GUNSHOT WOUNDS) (LUNGS---WOUNDS AND INJURIES)

LUKOMSKIY, G.I. (Moskva , V-313, Leninskiy prosp., d. 87-a, korp. 4,
kv.15); BISHKOV, P.N.; SANPITER, I.A.

Role of atelectasis of a lung operated on for chronic suppura-
tion in the development of bronchiectasis. Grud. khir. 5
no.6:91-95 N-D'63 (MIRA 17*2)

1. Iz kliniki fakul'tetskoy khirurgii (zav. - zasluzhennyy
deyatel' nauki prof. I.S.Zhorov) sanitarno-gigiyenicheskogo
fakul'teta I Moskovskogo ordena Lenina meditsinskogo insti-
tuta imeni I.M.Sechenova.

SOV/130-59-1-15/21

'AUTHORS: Bystrov, S.N. and Sanpiter, S.A.

TITLE: Improvement in Internal Transport at the Chelyabinsk Metallurgical Works (Uluchsheniye transportnykh perevozok na Chelyabinskome metallurgicheskom zavode)

PERIODICAL: Metallurg, 1959, Nr 1, pp 30-32 (USSR)

ABSTRACT: Stating that many improvements have recently been effected in the transport system at the Chelyabinsk metallurgical works where bottom pouring requires the monthly handling of 4300 tonnes of refractories at the refractories plant, the authors briefly describe some of the handling methods adopted at the works. Fig 1 shows a bucket for friable materials, Figs 2 and 3 the transport of ladle bricks and hollow-ware, respectively, in containers, and Fig 4 a side-dump wagon for fireclay powder. The dumping of ferro-alloys into special containers and refractory-brick transport on pallets are shown in Figs 5 and 6, respectively. Supply trains within the works are run to a schedule, with some locomotives specially assigned to

Card 1/2

SOV/130-59-1-15/21

Improvement in Internal Transport at the Chelyabinsk Metallurgical Works

given trains and others to given stations. As far as possible rolling-mill scrap is prepared at the mill for direct transport to the melting shops. A plan for improving production organisation is drawn up at the works each quarter.

There are 6 figures

Card 2/2

SANPITER, V.

Model of the ignition system. Za rul. 18 no.2:14-15 P '60.
(MIRA 13:6)

(Motor vehicles--Ignition)

L 45162-66 EWT(d)/EWP(1) IJP(c) BB/GG
ACC NR: AP6027522 (A) SOURCE CODE: UR/0317/66/000/005/0039/0041

AUTHOR: Sanpiter, V. (Lieutenant Colonel Corps of Engineers) 15
B

ORG: none

TITLE: Universal trainer MC

SOURCE: Tekhnika i vooruzheniye, no. 5, 1966, 39-41

TOPIC TAGS: trainer, training device, military training

ABSTRACT: The author participated in the development of a universal trainer intended for military personnel. The trainer had been on display at the Exhibit of the Achievements of the National Economy, USSR. It can be used as an aid in working on various problems, in the study of electric diagrams, in tests, etc. The student will produce the solution to a problem and be in a position to use the device for immediate checking. After one problem is correctly solved, the machine is ready for the next one. The trainer is equipped to supply clues and to correct errors made by the student. It is easily readjusted to a new program.

Card 1/2

SANSYZBAYEV, N.

Go deep into the economics of an enterprise. Fin. SSSR 23
no.10:71-74 0 162. (MIRA 15:10)

1. Nachal'nik Kontrol'no-revizionnogo upravleniya Ministerstva
finansov Kazakhskoy SSR.
(Kazakhstan—Auditing and inspection)

SANTA, A.

GATI, T.; SANTA, A.; LUDANY, G.

Effect of phenothiazine derivatives on the motility of intestinal villi.
Acta physiol. hung. 11(Suppl):100-101 1957.

1. Pathophysiologisches Institut der Medizinischen Universität und
Sanitätsdienst der Volksarmee, Budapest.

(CHLORPROMAZINE, eff.

on motility of intestinal villi in dogs (Ger))

(PROMETHAZINE, eff.

same)

(INTESTINE, SMALL, eff. of drugs on

chlorpromazine & promethazine, on motility of villi in
dogs (Ger))

SANTA, A.

Power-plant experiences in Bulgaria. P. LLO MAGYAR
ENERGIAGAZDASAG Budapest Vol. 9, no. 4, Apr. 1956

SOURCE East European Accessions List (EEAL) Library of Congress
Vol. 5, no. 8, August 1956

KOLOS, Richard, egyetemi tanar; FISCHER, Imre; HARSANYI, Istvan, dr., docens, kozgazdasagi tudomanyok kandidatusa; LENGYEL, Karoly, dr., tudomanyos munkatars; BALASSA, Laszlo, foeloado; KOZMA, Pal, dr., fokonyvelo; KASPER, Egon, dr.; MACSKASZV, Pal; LUKACS, Laszlo, okleveles elektromernok; SANTA, Balint, dr.

Scientific conference on retraining instrument industry personnel.
Meres automat 13 no.2/3:66 '65.

1. Secretary General, Council on Science and Higher Education, Budapest (for Kolos).
2. Head, Directorate of Instrument Industry of the Ministry of Metallurgy and Machine Industry, Budapest (for Fischer).
3. Instrument Industry Research Institute, Budapest (for Lengyel).
4. National Price Office, Budapest (for Balassa)
5. Instrument and Business Machine Trading Organization, Budapest (for Kozma).
6. Group Head, Ministry of Finance, Budapest (for Kasper).
7. Directorate of Instrument Industry of the Ministry of Metallurgy and Machine Industry, Budapest (for Santa).

SANTA, Imre (Budapest)

Office employees in the service of workers. Munka 14
no.9:11 S '64.

SASVARI, Kalman, dr. (Budapest, II., Pusztaszeri ut 57/69);
SANTA, Lorant

Crystallographic computing on the English Computer National
Elliott 803 B with autocode programs. Pt. 1. Acta chimica
Hung 40 no. 1:53-62 '64.

1. Central Research Institute for Chemistry, Hungarian Academy
of Sciences, Budapest, and Computing Center, Hungarian Academy
of Sciences, Budapest. 2. Danubian Ironworks, Dunaujvaros
(for Santa).

SANTA, N.; BOTTESCH, A.

Research on certain lipases in cultured carps. Rev biol 5 no.4:
363-372 '60. (EEAI 10:9)

1. Laboratoire de Physiologie animale. Centre de Recherches de
Biologie de l'Academie de la Republique Populaire Roumaine.

(Carp) (Lipase)

SANTA, N.; GURBAN, C.

Role of the aerobic metabolic processes in the physiology of smooth muscles. Studii cerc biol anim 12 no.3:371-380 '61.

1. Comunicare prezentata de Eug. A. Pora, membru corespondent al Academiei R.P.R.

SANTA, N.; BOTTESCH, A.

Research on certain lipases in cultivated carps. Studii cerc biol
anim 13 no.2:143-153 '61.

1. Laboratorul de fiziologia animalelor si a omului, Facultatea de
stiinte naturale, Universitatea C. I. Parhon, Bucuresti. Comunicare
prezentata de Eug. A. Pora, membru corespondent al Academii R.P.R.

(CARP) (LIPASE)

SANTA, N, prof.; MEDESAN, C.

The action of novocain on smooth muscle. Rumanian M Rev. no.1:265-269 Ja-Mr '61.

1. The Laboratory of Human and Animal Physiology, Faculty of Natural Sciences of the "G.I.Parhon" University, and the Institute of Biochemistry, Academy of the R.P.R.
(MUSCLES pharmacology) (PROCAINE pharmacology)

SANTA, N.; MEDESAN, C.

Influence of temperature on the automatic motility and on the reactivity of some smooth muscles. Rev biol 7 no.2:229-242 '62.

1. Faculté des Sciences naturelles de l'Université de Bucarest,
Chaire de physiologie animale.

SANTA, Valeria; DORNESCU, G.T.

Anatomic structure and histology of the heart in carps.
Comunicarile AR 12 no.5:543-550 My '62.

1. Comunicare prezentata de Th. Busnita, membru corespondent
al Academiei R.P.R.

CODREANU, Radu (Bucuresti); SANTA, Valeria (Bucuresti); VASILESCU, Eugen
(Bucuresti)

Cybernetics and the human brain. Natura Biologie 16 no.4:15-25 J1-Ag
'62.

SANTAVY, F.

SANTAVY, F.; TELUPILOVA, O.

Use of citrates in blood transfusion. C_{ps}. lek. cesk. 96 no. 44:
1401-1405 21 Oct 57.

1. Chemický ústav lékařské fakulty Palackého university v Olomouci,
prednosta prof. Dr F. Santavy. F. S., Olomouc, Lidická 8.

(CITRATES,
in blood transfusion; (Cz))

(BLOOD PRESERVED,
citrates in (Cz))

SANTALIN, K.

Forestry Engineering

Installing a sprinkler system with pressure pipe lines, Les. khoz. 5 No. 3(42), 1952

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

BANTALOV, A. A., ed.

Science of commodities in regard to most important export goods and the fundamentals of technology. Moskva, Mezhdunarodnaia kniga, 1979. 658p.

SANTALOV, A. A.

Present day petroleum problems in capitalistic countries, a verbatim report of a lecture on 29 July 1946 Moskva (Pravda) 1946. 22 p. (50-18911)

HD9560.5.S25

SANTALOV, A. A.

781.61
.S2

Imperialisticheskaya bor'ba za istochniki syr'ya (Imperialistic
Struggle For The Sources Of Raw Materials) Moskva, Akademkniga, 1954.

584 p. tables.

At head of title: Akademiya Nauk SSSR. Institut Ekonomiki.

"Istochniki": p. 573-583.

SANTALOV, ARSENIY ALEKSEYEVICH

SANTALOV, Arseniy Alekseyevich

SANTALOV, Arseniy Alekseyevich - Academic degree of Doctor of Economic Sciences, based on his defense, 22 June 1955, in the Council of the Inst of Economics Acad Sci USSR, of his dissertation entitled: "The imperialist struggle for sources of raw materials."
For the Academic Degree of Doctor of Science

SO: Byulleten' Ministerstva Vyshogo Obrazovaniya SSSR, List No. 2, 21 January 1956, Decisions of the Higher Certification Commission concerning academic degrees and titles.

